This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of diagnosing multiple sclerosis in a subject, the method comprising

providing a test sample from a subject; detecting in said test sample an anti-Glc (α 1-4) Glc (α) IgM type antibody; and

comparing the levels of said antibody in said test sample to the levels of said antibody in a control sample, wherein a similar level of said antibody in said test sample compared to the level of said antibody in a ~~wherein said~~ control sample ~~is selected~~ obtained from the group consisting of one or more individuals that have multiple sclerosis symptoms and have a known multiple sclerosis status is indicative of multiple sclerosis, and wherein a higher level of said antibody in said test sample compared to the level of said antibody in a control sample obtained from one or more individuals that do not show multiple sclerosis symptoms is indicative of multiple sclerosis,

thereby diagnosing multiple sclerosis in said subject.

2. (Currently Amended) The method of claim 1, wherein said method further comprises

detecting a second antibody selected from the group consisting of an anti-Glc (α)IgM type antibody, an anti-Glc (α 1-4) Glc (β) IgM type antibody, ~~an anti-Glc (β) antibody~~, an anti-Gal (β) IgA type antibody; an anti-Glc (β 1-4) Glc (β 1-4) Glc (β) IgM type antibody, an anti-GlcNAc (β 1-4) GlcNAc (β) IgA type antibody, an anti-L-Araf (α) IgM type antibody, an anti-L-Rha (α) IgM type antibody, an anti-GlcNAc(α) IgM type antibody, an anti-Gal (β1-3) [GlcNAc (β1-6)] GalNAc (α) IgM type antibody, an anti-Gal (β 1-4) GlcNAc (α) IgM type antibody, an anti-Gal (β 1-3) GalNAc (α) IgM type antibody, an anti-Gal (β 1-3) GlcNAc (β) IgM type antibody, an anti-GlcA (α) IgM type antibody, an anti-GlcA (β) IgM type antibody, and an anti-Xyl (α) IgM type antibody ; and

comparing the levels of the second antibody in said test sample to the levels of the second antibody in a control sample, wherein a similar level of said antibody in said test sample

compared to the level of said antibody in a ~~wherein said~~ control sample ~~is selected~~ obtained from the group consisting of one or more individuals that have multiple sclerosis symptoms and have a known multiple sclerosis status is indicative of multiple sclerosis, and wherein a higher level of said antibody in said test sample compared to the level of said antibody in a control sample obtained from one or more individuals that do not show multiple sclerosis symptoms is indicative of multiple sclerosis;

thereby diagnosing multiple sclerosis in said subject.

3. (Previously Presented) The method of claim 2, wherein the second antibody is an anti-Glc (α) antibody .

4. (Currently Amended) The method of claim 1, wherein said control sample is obtained from ~~consists essentially of~~ a population of one or more individuals that do not show multiple sclerosis symptoms .

5. (Currently Amended) The method of claim 1, wherein said control sample is obtained from ~~consists essentially of~~ a population of one or more individuals that have multiple sclerosis symptoms with a known multiple sclerosis status.

6. (Previously Presented) The method of claim 1, wherein said test sample is a biological fluid.

7. (Previously Presented) The method of claim 6, wherein said biological fluid is whole blood, serum, plasma, spinal cord fluid, urine, or saliva.

8. (Previously Presented) The method of claim 1, wherein said biological fluid is serum.

9. (Previously Presented) The method of claim 1, wherein said subject is a female.

10. (Previously Presented) The method of claim 1, wherein said subject is a male.

Claims 11-15 (Cancelled).

16. (Previously Presented) The method of claim 1, wherein said diagnosis is an early diagnosis of multiple sclerosis.

17. (Currently Amended) The method of claim 1, wherein said group consisting of one or more individuals ~~control sample~~ is determined using an Expanded Disability Status Scale (EDSS) assessment or a Magnetic Resonance Imaging (MRI) assessment.

18. (Currently Amended) The method of claim 1, wherein said group consisting of one or more individuals ~~control sample~~ is determined using an Expanded Disability Status Scale (EDSS) assessment.

19. (Previously Presented) The method of claim 1, wherein said method comprises detecting at least two of said antibodies.

20. (Previously Presented) The method of claim 1, wherein said method comprises detecting at least four of said antibodies.

21. (Withdrawn).

22. (Currently Amended) A method of diagnosing a multiple sclerosis exacerbation in a subject, the method comprising

providing a test sample from a subject;

detecting an anti- Glc (α 1-4) Glc (α) IgM type antibody in said test sample; and

comparing the levels of said antibody in said test sample to a control sample, wherein a higher level of said antibody in said test sample compared to the level of said antibody in a ~~wherein said~~ control sample [[is]] derived from one or more individuals that do not show symptoms of a multiple sclerosis exacerbation and whose multiple sclerosis status is in remission is indicative of multiple sclerosis exacerbation, and wherein a similar level of said antibody in said test sample compared to the level of said antibody in a control sample derived from one or

more individuals that show symptoms of a multiple sclerosis exacerbation ~~whose multiple sclerosis status is known,~~ is indicative of multiple sclerosis exacerbation,

thereby diagnosing multiple sclerosis exacerbation in said subject.

23. (Currently Amended) The method of claim 22, wherein said control sample is obtained from ~~consists essentially of~~ a population of one or more individuals that have multiple sclerosis symptoms with a known multiple sclerosis status .

24. (Currently Amended) The method of claim 22, wherein said method comprises

detecting an anti-Glc (α 1-4) Glc (α) IgM type antibody and an anti-Glc (α) IgM type antibody in said test sample; and

comparing the levels of said ~~antibody~~ antibodies in said test sample to said control sample, wherein a higher level of said antibody in said test sample compared to the level of said antibody in a control sample derived from one or more individuals that do not show symptoms of a multiple sclerosis exacerbation and whose multiple sclerosis status is in remission is indicative of multiple sclerosis exacerbation, and wherein a similar level of said antibody in said test sample compared to the level of said antibody in a control sample derived from one or more individuals that show symptoms of a multiple sclerosis exacerbation is indicative of multiple sclerosis exacerbation,

thereby diagnosing multiple sclerosis exacerbation in said subject.

25. (Previously Presented) The method of claim 22, wherein said method comprises

detecting an anti-α-Glucose IgM type antibody and an anti-Glc (α 1-4) Glc (α) IgM type antibody in said test sample; and

comparing the levels of said antibodies in said test sample to said control sample.

26. (Currently Amended) The method of claim 22, wherein said control sample is obtained from ~~consists essentially of~~ a population of one or more individuals in remission multiple sclerosis status that do not show symptoms of a multiple sclerosis exacerbation, and a multiple sclerosis exacerbation is diagnosed in said subject if more anti-Glc (α) antibody or anti-Glc (α 1-4) Glc (α) antibody is present in said test sample than in said control sample.

27. (Currently amended) The method of claim 22, wherein said control sample is obtained from ~~consists essentially of~~ a population of one or more individuals in exacerbated ~~that their~~ multiple sclerosis status ~~in exacerbation~~, ~~and~~ that show symptoms of a multiple sclerosis exacerbation, and a multiple sclerosis exacerbation is diagnosed in said subject if similar anti-Glc (α) antibody or anti-Glc (α 1-4) Glc (α) antibody levels ~~is~~ are present in said test sample and in said control sample.

28. (Previously Presented) The method of claim 22, wherein said test sample is a biological fluid.

29. (Previously Presented) The method of claim 28, wherein said biological fluid is whole blood, serum, plasma, spinal cord fluid, urine, or saliva.

30. (Previously Presented) The method of claim 28, wherein said biological fluid is serum.

31. (Previously Presented) The method of claim 22, wherein said subject is a female.

32. (Previously Presented) The method of claim 22, wherein said subject is a male.

33. (Previously Presented) The method of claim 22, wherein said diagnosis is an early diagnosis of multiple sclerosis exacerbation.

34. (Previously Presented) The method of claim 22, wherein said subject has been treated by subcutaneous administration of interferon beta.

35. (Previously Presented) The method of claim 22, wherein said subject has been treated by subcutaneous administration of glitamerer acetate.

36. (Currently Amended) A method for assessing multiple sclerosis disease severity in a subject, the method comprising

providing a test sample from a subject;

determining whether said test sample contains an anti-Glc (α 1-4) Glc (α) IgM type antibody; and

comparing the level of said at least one antibody in said test sample to a control sample, wherein a higher level of said antibody in said test sample compared to the level of said antibody in said control sample is indicative of multiple sclerosis, wherein said control sample is derived from one or more individuals whose multiple sclerosis disease severity is known.

thereby assessing of multiple sclerosis severity in said subject.

37. (Currently Amended) The method of claim 36, wherein said control sample is obtained from ~~consists essentially of~~ a population of one or more individuals that have multiple sclerosis symptoms with a known multiple sclerosis status .

38. (Previously Presented) The method of claim 36 , wherein said method comprises

detecting an anti-Glc (α 1-4) Glc (α) IgM type antibody and an anti-Glc (α) IgM type antibody in said test sample; and

comparing the levels of said antibodies in said test sample to said control sample.

39. (Previously Presented) The method of claim 37 , wherein said method comprises

detecting an anti-Glc (α 1-4) Glc (α) IgM type antibody and an anti-Glc (α) IgM type antibody in said test sample; and

comparing the level of said antibodies in said test sample to said control sample.

40. (Currently Amended) The method of claim 36, wherein said control sample is obtained from ~~consists essentially of~~ a population of one or more individuals whose multiple sclerosis disease severity is defined by Expanded Disability Status Scale (EDSS), changes in an EDSS score, or a Magnetic Resonance Imaging (MRI) assessment.

41. (Previously Presented) The method of claim 36, wherein said test sample is a biological fluid.

42. (Previously Presented) The method of claim 41, wherein said biological fluid is whole blood, serum, plasma, spinal cord fluid, urine, saliva.

43. (Previously Presented) The method of claim 41, wherein said biological fluid is serum.

44. (Previously Presented) The method of claim 36, wherein said subject is a female.

45. (Previously Presented) The method of claim 36, wherein said subject is a male.

46. -59. (Withdrawn)